From:

Nelson, Debra GRE-MG [dnelson@grenergy.com]

Sent:

Wednesday, June 15, 2011 10:53 AM

To: Cc: Dendy, Lewis H. Bachman, Tom A.

Subject:

RE: Coal Creek fly ash cost documentation

I am rounding off the final data and should be able to get it to you either late today or early tomorrow.

Deb Nelson Environmental Services Great River Energy (763)445-5208 dnelson@grenergy.com

----Original Message-----

From: Dendy, Lewis H. [mailto:ldendy@nd.gov] Sent: Wednesday, June 15, 2011 10:38 AM

To: Nelson, Debra GRE-MG

Cc: Bachman, Tom A.

Subject: RE: Coal Creek fly ash cost documentation

Hello Deb,

Can you provide an updated estimate of when you will be able to respond to EPA's request below? EPA is approaching their deadline for publishing their determination.

Thanks,

Lew Dendy
Environmental Scientist
ND Division of Air Quality
918 E. Divide Ave. Risma

918 E. Divide Ave., Bismarck, ND 58501-1947 Ph 701.328.5188, Fax 701.328.5185 http://www.ndhealth.gov/AQ/Airhomepage.htm

----Original Message----

From: Nelson, Debra GRE-MG [mailto:dnelson@grenergy.com]

Sent: Thursday, June 02, 2011 7:59 AM

To: Dendy, Lewis H.

Subject: RE: Coal Creek fly ash cost documentation

Lew,

I will gather the information. May take a few days!

Deb Nelson Environmental Services Great River Energy (763)445-5208 dnelson@grenergy.com

----Original Message----

From: Dendy, Lewis H. [mailto:ldendy@nd.gov]

Sent: Wednesday, June 01, 2011 2:23 PM

To: Nelson, Debra GRE-MG

Cc: Bachman, Tom A.; Semerad, Jim L.

Subject: FW: Coal Creek fly ash cost documentation

Hello Deb,

Please see the EPA/R8 email below for an additional request for supporting information to assist them with their decision on BART for Coal Creek Station. We request that GRE provide any available information in response to the questions. I'll review our file for anything that we might have.

Please let Tom or I know if we can be of assistance.

Thanks.

Lew Dendy **Environmental Scientist** ND Division of Air Quality 918 E. Divide Ave., Bismarck, ND 58501-1947 Ph 701.328.5188, Fax 701.328.5185 http://www.ndhealth.gov/AQ/Airhomepage.htm

----Original Message----

From: Fallon.Gail@epamail.epa.gov [mailto:Fallon.Gail@epamail.epa.gov]

Sent: Wednesday, June 01, 2011 1:31 PM To: Bachman, Tom A.; Dendy, Lewis H.

Subject: Coal Creek fly ash cost documentation

Tom and Lew,

Per our phone conversation yesterday, we are looking for additional documentation to support your NOx BART determination for Coal Creek.

Specifically, we are interested in the following cost information pertaining to lost fly ash sales which is a large component of the cost for SCR and SNCR:

- 1. Supporting documentation (such as invoices/bills of sale) for fly ash pricing and tonnage
- Several years of data would be helpful to show any price and tonnage fluctuations
- 2. Supporting documentation regarding landfill costs
- 3. Cost to remediate the ammonia in the ash
- Headwaters Resources' web literature indicates that it can add a chemical reagent to the ash to convert the ammonia to harmless compounds. The cost of this process would seem to be relevant to the BART analysis.

Perhaps some of this information has already been provided somewhere in the SIP. Lew mentioned you may have provided something in response to FLM comments on ammonia mitigation. In Appendix J.1.2 of the SIP, I found where ND references a couple of Great River Energy emails and a Univ. of Kentucky study regarding ammonia in fly ash that are supposed to be attached but are not. Maybe there is something relevant there.

Please provide these attachments as well.

Thanks for any assistance you can offer.

Gail

Gail Fallon
Regional Haze Program Manager
Air Quality Planning Unit (8P-AR)
US EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

Phone: 303-312-6281 Fax: 303-312-6064

Email: Fallon.Gail@epa.gov

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From:

Nelson, Debra GRE-MG [dnelson@grenergy.com]

Wednesday, June 15, 2011 4:10 PM Sent:

To:

Dendy, Lewis H.

Cc:

Bachman, Tom A.: Semerad, Jim L.

Subject: Attachments: RE: Coal Creek fly ash cost documentation

NH4MitigationCosts.pdf; FlyashSales2006-2010.pdf; NDDH- Landfill.pdf

Lew.

We respectfully submit our response to the questions raised by US EPA Region 8.

- 1. Fly ash Pricing and tonnage: Fly ash sales at Coal Creek Station are paid from the weigh tickets obtained from the fly ash loaded trucks. The marketer of the fly ash will pay GRE directly from the accumulated truck weigh tickets on a monthly basis. GRE does not invoice the marketer for the ash. The existing records for sales are the individual truck weigh tickets. The attached document, FlyashSales2006-2010.pdf, contains the total fly ash sales in tonnage and in dollars received, and a calculated \$/ton. This data was compiled from the thousands of individual weigh tickets obtained from the ash haulers. If there is still a need for the supporting documentation for these years we can provide copies of all the weigh tickets. This process will take some time to complete and some resources dedicated to completing. Please let me know if further documentation is required.
- Landfill disposal costs: During the development of the Coal Creek Station BART analysis, CCS was also re-evaluating the model for landfill disposal costs. When the revised BART analysis was submitted to NDDH the Landfill model was predicting a \$6/ton disposal cost - the model was not finalized at that time. The value used in the BART analysis was \$6/ton based upon an email message from the plant to the engineering firm contracted to conduct the analysis. Upon refinement and finalization of the model, the final value contained within the model puts our landfill disposal costs at \$7.19/ton (in 2007 dollars). The attached document, LandfillDisposal.pdf, is a presentation of the final model values.
- Inclusion of ammonia mitigation in BART analysis: A quick evaluation of the BART Analysis data reveals that the inclusion of ammonia mitigation technology has the same effect on the BART analysis as land filling the ash. The estimated installed cost for ammonia mitigation was roughly estimated by Headwaters at \$5-\$10 per ton of ash. Landfill costs are estimated by the final landfill model at around \$7.19 (in 2007) dollars) per ton of ash. The attached tables (NH4MitigationCosts.pdf) include the ammonia mitigation technology in the SCR and SNCR economic analysis. The final cost summary table has remained virtually the same. Whether the analysis utilizes landfill costs or ammonia mitigation costs, it does not change the conclusions of the BART analysis that SCR and SNCR technologies are not cost effective.

If there are further questions please feel free to contact me. I will be unavailable June 16 & 17th but will be available to address further questions starting June 20th.

Deb Nelson Environmental Services Great River Energy (763)445-5208 dnelson@grenergy.com

----Original Message-----

From: Dendy, Lewis H. [mailto:ldendy@nd.gov]

Sent: Wednesday, June 01, 2011 2:23 PM

To: Nelson, Debra GRE-MG

Cc: Bachman, Tom A.; Semerad, Jim L.

Subject: FW: Coal Creek fly ash cost documentation

Hello Deb.

Please see the EPA/R8 email below for an additional request for supporting information to assist them with their decision on BART for Coal Creek Station. We request that GRE provide any available information in response to the questions. I'll review our file for anything that we might have.

Please let Tom or I know if we can be of assistance.

Thanks.

Lew Dendy
Environmental Scientist
ND Division of Air Quality

918 E. Divide Ave., Bismarck, ND 58501-1947 Ph 701.328.5188, Fax 701.328.5185 http://www.ndhealth.gov/AQ/Airhomepage.htm

----Original Message----

From: Fallon.Gail@epamail.epa.gov [mailto:Fallon.Gail@epamail.epa.gov]

Sent: Wednesday, June 01, 2011 1:31 PM

To: Bachman, Tom A.; Dendy, Lewis H.

Subject: Coal Creek fly ash cost documentation

Tom and Lew,

Per our phone conversation yesterday, we are looking for additional documentation to support your NOx BART determination for Coal Creek.

Specifically, we are interested in the following cost information pertaining to lost fly ash sales which is a large component of the cost for SCR and SNCR:

- 1. Supporting documentation (such as invoices/bills of sale) for fly ash pricing and tonnage
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Please provide these attachments as well.

Thanks for any assistance you can offer.

Gail

Gail Fallon
Regional Haze Program Manager
Air Quality Planning Unit (8P-AR)
US EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

Phone: 303-312-6281 Fax: 303-312-6064

Email: Fallon.Gail@epa.gov

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copying, distributing or using the information. Please contact the sender immediately by return email and delete the original message.

From:

Nelson, Debra GRE-MG [dnelson@grenergy.com]

Sent:

Thursday, June 16, 2011 3:24 PM

To:

Semerad, Jim L.

Cc:

Bachman, Tom A.; Dendy, Lewis H.

Subject:

RE: Coal Creek fly ash cost documentation

Jim,

The \$36/ton was a error propagated with our 2nd "original" submittal in 2007. I looked into our original 2006 submittal (which we had recalled) and the \$/ton was \$5. So in reconfiguring the spreadsheets the value was mistyped and GRE submitted the improper number.

Deb Nelson
Environmental Services
Great River Energy
(763)445-5208
dnelson@grenergy.com

----Original Message-----

From: Semerad, Jim L. [mailto:jsemerad@nd.gov]

Sent: Thursday, June 16, 2011 11:42 AM

To: Nelson, Debra GRE-MG

Cc: Bachman, Tom A.; Dendy, Lewis H.

Subject: RE: Coal Creek fly ash cost documentation

Deb:

I am attaching an email from EPA that poses a follow-up question to the submittal referenced below.

Please reply so that we can respond to EPA.

Note that Lew is out until next week.

Thanks.

Jim Semerad Division of Air Quality State Dept. of Health (701) 328-5188 jsemerad@nd.gov Division Website:

http://www.health.state.nd.us/AQ/Airhomepage.htm

-----Original Message-----From: Dendy, Lewis H.

Sent: Thursday, June 16, 2011 6:53 AM

To: Nelson, Debra GRE-MG

Cc: Semerad, Jim L.; Bachman, Tom A.

Subject: RE: Coal Creek fly ash cost documentation

Deb,

I appreciate your effort and GRE's quick response.

Thank you very much,

Lew Dendy
Environmental Scientist
ND Division of Air Quality
918 E. Divide Ave., Bisma

918 E. Divide Ave., Bismarck, ND 58501-1947 Ph 701.328.5188, Fax 701.328.5185 http://www.ndhealth.gov/AQ/Airhomepage.htm

----Original Message-----

From: Nelson, Debra GRE-MG [mailto:dnelson@grenergy.com]

Sent: Wednesday, June 15, 2011 4:10 PM

To: Dendy, Lewis H.

Cc: Bachman, Tom A.; Semerad, Jim L.

Subject: RE: Coal Creek fly ash cost documentation

Lew.

We respectfully submit our response to the questions raised by US EPA Region 8.

1. Fly ash Pricing and tonnage: Fly ash sales at Coal Creek Station are paid from the weigh tickets obtained from the fly ash loaded trucks. The marketer of the fly ash will pay GRE directly from the accumulated truck weigh tickets on a monthly basis. GRE does not invoice the marketer for the ash. The existing records for sales are the individual truck weigh tickets. The attached document, FlyashSales2006-2010.pdf,

contains the total fly ash sales in tonnage and in dollars received, and a calculated \$/ton. This data was compiled from the thousands of individual weigh tickets obtained from the ash haulers. If there is still a need for the supporting documentation for these years we can provide copies of all the weigh tickets. This process will take some time to complete and some resources dedicated to completing. Please let me know if further documentation is required.

- 2. Landfill disposal costs: During the development of the Coal Creek Station BART analysis, CCS was also re-evaluating the model for landfill disposal costs. When the revised BART analysis was submitted to NDDH the Landfill model was predicting a \$6/ton disposal cost the model was not finalized at that time. The value used in the BART analysis was \$6/ton based upon an email message from the plant to the engineering firm contracted to conduct the analysis. Upon refinement and finalization of the model, the final value contained within the model puts our landfill disposal costs at \$7.19/ton (in 2007 dollars). The attached document, LandfillDisposal.pdf, is a presentation of the final model values.
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If there are further questions please feel free to contact me. I will be unavailable June 16 & 17th but will be available to address further questions starting June 20th.

Deb Nelson Environmental Services Great River Energy (763)445-5208 dnelson@grenergy.com

----Original Message-----

From: Dendy, Lewis H. [mailto:ldendy@nd.gov] Sent: Wednesday, June 01, 2011 2:23 PM

To: Nelson, Debra GRE-MG

Cc: Bachman, Tom A.; Semerad, Jim L.

Subject: FW: Coal Creek fly ash cost documentation

Hello Deb,

Please see the EPA/R8 email below for an additional request for supporting information to assist them with their decision on BART for Coal Creek Station. We request that GRE provide any available information in response to the questions. I'll review our file for anything that we might have.

Please let Tom or I know if we can be of assistance.

Thanks.

Lew Dendy
Environmental Scientist
ND Division of Air Quality
918 E. Divide Ave., Bismarck, ND 58501-1947 Ph 701.328.5188, Fax 701.328.5185
http://www.ndhealth.gov/AQ/Airhomepage.htm

----Original Message----

From: Fallon.Gail@epamail.epa.gov [mailto:Fallon.Gail@epamail.epa.gov]

Sent: Wednesday, June 01, 2011 1:31 PM To: Bachman, Tom A.; Dendy, Lewis H.

Subject: Coal Creek fly ash cost documentation

Tom and Lew,

Per our phone conversation yesterday, we are looking for additional documentation to support your NOx BART determination for Coal Creek.

Specifically, we are interested in the following cost information pertaining to lost fly ash sales which is a large component of the cost for SCR and SNCR:

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Please provide these attachments as well.

Thanks for any assistance you can offer.

Gail

Gail Fallon
Regional Haze Program Manager
Air Quality Planning Unit (8P-AR)
US EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

Phone: 303-312-6281 Fax: 303-312-6064

Email: Fallon.Gail@epa.gov

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From:

Roth, Mary Jo GRE-MG [mjroth@GREnergy.com]

Sent:

Friday, July 15, 2011 2:35 PM

To:

O'Clair, Terry L.

Cc:

Bachman, Tom A.; Stockdill, Diane GRE-CC; Weeda, John GRE-CC; Nelson, Debra GRE-

MG

Subject:

FW: Headwaters' Ammonia Slip Mitigation Technology

Terry,

Below is information we received today from Headwaters, developer of the ammonia-in-ash mitigation technology. This affirms the information provided in my letter from earlier today.

MJ

Mary Jo Roth Manager, Environmental Services Great River Energy 12300 Elm Creek Blvd. Maple Grove, MN 55369 763.445.5212 (o) 612.810.4677 (c)

From: Rafic Minkara [mailto:rminkara@headwaters.com]

Sent: Friday, July 15, 2011 10:47 AM

To: Weeda, John GRE-CC

Cc: Jerry Smith

Subject: Headwaters' Ammonia Slip Mitigation Technology

John,

In reference to Headwaters' Ammonia slip mitigation (ASM) technology, the ASM technology was initially developed in 2001 with the first US patent issued in 2004. This first generation of ASM technology consisted of treating fly ash with a chemical oxidizer (calcium hypochlorite) to destroy ammonia in solution after water addition to ash or concrete mix containing fly ash. The 1st commercial ASM system was installed at RG&E Russell Station in Rochester NY in 2004. The Russell Station which was burning eastern bituminous coal and equipped with SNCR's has since shut-down. The 2nd ASM system was installed at the East Lake Station in Ohio. This 600 MW unit is fired with a 50/50 blend of PRB and eastern bituminous and generates about 100,000 tpy of fly ash. Up to 70% of the fly ash with moderate levels of ammonia ranging between 50-200 ppm have been treated at Eastlake for sale into concrete

applications. The East Lake Plant fly ash is not treated during periods of high or highly variable ammonia in ash concentrations which are typical during SNCR upset or plant load variability.

We don't have an installation at a lignite fired station. Headwaters has not conducted any research on application of this technology to lignite derived fly ash. The limited current experience in commercial application and lack of research is not adequate for Headwaters to be able to provide any guarantee that the process can be successfully applied to treat lignite ash at the Coal Creek Station.

Let me know if you need any more information.

Regards,

Rafic,

Rafic Minkara, PhD., PE Vice President – Technology Headwaters Energy Services 204 Lakeside Drive Kennesaw, GA 30144

- 770-330-0689
- •770-590-9534
- •rminkara@headwaters.com<<u>mailto:rminkara@headwaters.com</u>>

From:

Nelson, Debra GRE-MG [dnelson@grenergy.com]

Sent: To: Monday, July 18, 2011 11:34 AM (Fallon Gail@epamail.epa.gov)

Cc:

Dendy, Lewis H.; Bachman, Tom A.; Roth, Mary Jo GRE-MG; Stockdill, Diane GRE-CC

Subject:

RE: EPA Question

Gail,

The information we provided in the submittal to NDDH on July 18, 2011 was not intended to be confidential information. It will be our official response to questions raised about our BART Analysis.

Deb Nelson
Environmental Services
Great River Energy
(763)445-5208
dnelson@grenergy.com

----Original Message-----

From: Bachman, Tom A. [mailto:tbachman@nd.gov]

Sent: Monday, July 18, 2011 11:26 AM

To: Nelson, Debra GRE-MG

Cc: Dendy, Lewis H. Subject: EPA Question

Deb:

See EPA's question below. I assume the information is not confidential. If so, please send an email to Gail Fallon indicating as such a.s.a.p. If it is confidential, please contact me immediately.

Tom Bachman, P.E. Sr. Env. Engr. ND Dept. of Health (701) 328-5188

----Original Message-----

From: Gail Fallon [mailto:Fallon.Gail@epamail.epa.gov]

Sent: Monday, July 18, 2011 10:01 AM

To: Bachman, Tom A.

Subject: Re: FW: Response to EPA questions

Tom,

We will review this additional information. Can you please clarify with GRE whether or not they intend for all the information they submitted to be confidential based on the following footer language that appears to be standard on all their emails:

NOTICE TO RECIPIENT: The information contained in this message from Great River Energy and any attachments are confidential and intended only for the named recipient(s). If you have received this message in error, you are prohibited from copying, distributing or using the information. Please contact the sender immediately by return email and delete the original message.

If they do not intend for this to be confidential, can you please have Deb send me an email confirming. If they do intend for the information to remain confidential we are probably going to have a problem considering it as we need to make it available to the public in our action.

Thanks, Gail

Gail Fallon Regional Haze Program Manager Air Quality Planning Unit (8P-AR) US EPA Region 8 1595 Wynkoop Street Denver, CO 80202-1129

Phone: 303-312-6281 Fax: 303-312-6064

Email: Fallon.Gail@epa.gov

From: Nelson, Debra GRE-MG [mailto:dnelson@grenergy.com]

Sent: Friday, July 15, 2011 11:23 AM To: O'Clair, Terry L.; Bachman, Tom A.

Cc: Roth, Mary Jo GRE-MG; Stockdill, Diane GRE-CC; Weeda, John GRE-CC

Subject: Response to EPA questions

Terry and Tom,

Attached is GRE's response to the questions raised by EPA concerning NOx emissions from CCS.

If you have any questions please feel free to give me a call.

Deb Nelson
Environmental Administrator
Great River Energy
12300 Elm Creek Blvd.,
Maple Grove, MN 55369-4718
direct: 763-445-5208/ fax: 763-4455239/ cell: 6

direct: 763-445-5208/ fax: 763-4455239/ cell: 612-325-8210

www.GreatRiverEnergy.com

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[attachment "SNCR Response to NDDH.PDF" deleted by Gail Fallon/R8/USEPA/US]

[attachment "Ammonia Mitigation Headwaters.pdf"

deleted by Gail Fallon/R8/USEPA/US]

^{*} Please consider the environment before you print this e-mail.

From:

Nelson, Debra GRE-MG [dnelson@grenergy.com]

Sent: To: Monday, July 18, 2011 12:32 PM (Fallon.Gail@epamail.epa.gov)

Cc:

Dendy, Lewis H.; Bachman, Tom A.; Roth, Mary Jo GRE-MG; Stockdill, Diane GRE-CC

Subject:

RE: EPA Question

Gail,

My apologies, I meant to type in July 15, instead of July 18 in the message below!

Deb Nelson
Environmental Services
Great River Energy
(763)445-5208
dnelson@grenergy.com

----Original Message----

From: Nelson, Debra GRE-MG

Sent: Monday, July 18, 2011 11:34 AM To: (Fallon.Gail@epamail.epa.gov)

Cc: Dendy, Lewis H.; 'Bachman, Tom A.'; Roth, Mary Jo GRE-MG; Stockdill, Diane

GRE-CC

Subject: RE: EPA Question

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Environmental Services
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(763)445-5208
dnelson@grenergy.com

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To: Nelson, Debra GRE-MG

Cc: Dendy, Lewis H. Subject: EPA Question

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Sent: Monday, July 18, 2011 10:01 AM

To: Bachman, Tom A.

Subject: Re: FW: Response to EPA questions

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Gail Fallon
Regional Haze Program Manager
Air Quality Planning Unit (8P-AR)
US EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

Phone: 303-312-6281 Fax: 303-312-6064 Email: Fallon.Gail@epa.gov

From: Nelson, Debra GRE-MG [mailto:dnelson@grenergy.com]

Sent: Friday, July 15, 2011 11:23 AM To: O'Clair, Terry L.; Bachman, Tom A.

Cc: Roth, Mary Jo GRE-MG; Stockdill, Diane GRE-CC; Weeda, John GRE-CC

Subject: Response to EPA questions

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If you have any questions please feel free to give me a call.

Deb Nelson
Environmental Administrator
Great River Energy
12300 Elm Creek Blvd.,
Maple Grove, MN 55369-4718
direct: 763-445-5208/ fax: 763-4455239/ cell: 612-325-8210
www.GreatRiverEnergy.com

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[attachment "SNCR Response to NDDH.PDF" deleted by Gail Fallon/R8/USEPA/US] [attachment "Ammonia Mitigation Headwaters.pdf" deleted by Gail Fallon/R8/USEPA/US]

From:

Roth, Mary Jo GRE-MG [mjroth@GREnergy.com]

Sent:

Friday, February 10, 2012 4:14 PM

To:

O'Clair, Terry L.

Cc:

Bachman, Tom A.; Nelson, Debra GRE-MG; Stockdill, Diane GRE-CC

Subject:

Coal Creek Station BART analysis - Response to comments from January 19 letter

Terry,

We have completed an updated BART analysis for Coal Creek Station in response to comments provided in your January 19 letter. We recognize there were a number of inadvertent errors and inconsistencies in our November 21 submittal. We have reviewed the entire report, made edits responsive to your comments, and had an independent review conducted by a consultant not connected with our analysis.

It is important to note that correction of the inadvertent errors and the related revised analysis do not change the conclusions of the previous report – specifically, that the presumptive NOx limit of 0.17 lb/mmBtu is both cost effective and results in significant visibility improvements in North Dakota's Class I areas. The analysis continues to provide a solid basis for why SNCR is not a cost effective or appropriate BART technology for Coal Creek Station.

Via the following link, you can access the updated analysis along with a cover letter that provides specific responses to your January 19 letter.

ftp://ftp.grenergy.com/pub/dnelson/

I have also sent the cover letter and report via U.S. mail to you and to Tom.

Please let me know if you have any questions or require further information.

MJ

Mary Jo Roth
Manager, Environmental Services
Great River Energy
12300 Elm Creek Boulevard
Maple Grove, MN 55369-4718
office: 763.445.5212 // cell: 612.810.4677
www.GreatRiverEnergy.com

From:

Roth, Mary Jo GRE-MG [mjroth@GREnergy.com]

Sent:

Tuesday, February 14, 2012 1:22 PM

To:

O'Clair, Terry L.

Cc:

Bachman, Tom A.; Joel Trinkle; Nelson, Debra GRE-MG

Subject:

RE: Coal Creek Station BART analysis - Response to comments from January 19 letter

Terry,

We will be putting in a call to Barr as well – and will get back to you.

MJ

From: O'Clair, Terry L. [mailto:toclair@nd.gov]
Sent: Tuesday, February 14, 2012 1:17 PM

To: Roth, Mary Jo GRE-MG **Cc:** Bachman, Tom A.

Subject: RE: Coal Creek Station BART analysis - Response to comments from January 19 letter

Hi Mary Jo,

Thanks for getting this to us. We are in the process of reviewing. One item that appears puzzling is the Appendix D Visibility Tables. The Year 2000 Modeling Results Table, specifically the values for SNCR and SNCR with LNC3+. The rows may be switched. We have a call in to Barr asking them to take a look at it. Although the Tables for 2001 and 2002 appear ok, the summary table "Average Incremental Control Comparison for the 98th % delta deciview" is also suspect because it is built from the other three tables. We will keep you posted on other questions we may have.

Terry

From: Roth, Mary Jo GRE-MG [mailto:mjroth@GREnergy.com]

Sent: Friday, February 10, 2012 4:14 PM

To: O'Clair, Terry L.

Cc: Bachman, Tom A.; Nelson, Debra GRE-MG; Stockdill, Diane GRE-CC

Subject: Coal Creek Station BART analysis - Response to comments from January 19 letter

Terry,

We have completed an updated BART analysis for Coal Creek Station in response to comments provided in your January 19 letter. We recognize there were a number of inadvertent errors and inconsistencies in our November 21 submittal. We have reviewed the entire report, made edits responsive to your comments, and had an independent review conducted by a consultant not connected with our analysis.

It is important to note that correction of the inadvertent errors and the related revised analysis do not change the conclusions of the previous report – specifically, that the presumptive NOx limit of 0.17 lb/mmBtu is both cost effective and results in significant visibility improvements in North Dakota's Class I areas. The analysis continues to provide a solid basis for why SNCR is not a cost effective or appropriate BART technology for Coal Creek Station.

Via the following link, you can access the updated analysis along with a cover letter that provides specific responses to your January 19 letter.

ftp://ftp.grenergy.com/pub/dnelson/

I have also sent the cover letter and report via U.S. mail to you and to Tom.

Please let me know if you have any questions or require further information.

MJ

Mary Jo Roth
Manager, Environmental Services
Great River Energy
12300 Elm Creek Boulevard
Maple Grove, MN 55369-4718
office: 763.445.5212 // cell: 612.810.4677
www.GreatRiverEnergy.com

From:

Roth, Mary Jo GRE-MG [mjroth@GREnergy.com]

Sent:

Thursday, April 12, 2012 10:55 AM

To: Cc: Bachman, Tom A. O'Clair, Terry L.

Subject:

RE: Coal Creek Station NOx BART Analysis

Tom,

Thank you for forwarding the trade secrets rule. I will provide something to NDDH as soon as possible after I make further contact with EPRI concerning the trade secret claim for their report.

MJ

From: Bachman, Tom A. [mailto:tbachman@nd.gov]

Sent: Wednesday, April 11, 2012 2:04 PM

To: Roth, Mary Jo GRE-MG

Cc: O'Clair, Terry L.

Subject: RE: Coal Creek Station NOx BART Analysis

Mary Jo:

I have downloaded the document.

Regarding the confidential EPRI report, our rules (NDAC 33-15-01-16 – copy attached) require a letter requesting that the information be kept confidential as well as other information outlined in 33-15-01-16.2. Please provide the required documentation as soon as possible.

If you have any questions, please contact Terry or me.

Tom Bachman, P.E. Sr. Env. Engr. ND Dept. of Health (701) 328-5188

From: Roth, Mary Jo GRE-MG [mailto:mjroth@GREnergy.com]

Sent: Wednesday, April 11, 2012 12:43 PM **To:** O'Clair, Terry L.; Bachman, Tom A.

Cc: Olsen, Eric GRE-MG; 'William Bumpers'; Nelson, Debra GRE-MG

Subject: RE: Coal Creek Station NOx BART Analysis

Tom,

Per your voicemail message to Deb Nelson, I have added the following document to our ftp site: <u>BART Supplemental Analysis (with App A-D and F-G) 04-05-2012 v.2.pdf</u>. This Version 2 replaces the version that was originally posted. Directions for accessing the ftp site are provided below. Please let me know if you have any problem accessing the ftp site or the documents. I will also provide two hard copies of the document per U.S. mail.

From: Roth, Mary Jo GRE-MG

Sent: Thursday, April 05, 2012 3:22 PM **To:** Terry O'Clair (<u>toclair@nd.gov</u>)

Cc: Tom Bachman - NDDH; Olsen, Eric GRE-MG; William Bumpers; Nelson, Debra GRE-MG

Subject: Coal Creek Station NOx BART Analysis

Terry,

Great River Energy has completed its supplemental BART analysis for Coal Creek Station which we believe addresses all the comments from your January 19 and February 28 letters. In addition to the supplemental analysis, we have prepared a legal and technical review of EPA's BART determination per its FIP issued March 2. Also part of the package is a transmittal letter to you.

The supplemental BART analysis includes 7 appendices (A thru G). Please note that Appendix E is a confidential report which we are submitting as confidential business information. This appendix will be provided by way of a separate, sealed envelope per Air Pollution Control Rules for the State of North Dakota at 33-15-01-16. The legal and technical review of EPA's FIP includes one attachment.

I will be mailing to you a hard copy version of the documents via U.S. mail. In the interest of supplying NDDH with the information as quickly as possible, you may also access the documents (with the exception of Appendix E) immediately via our ftp site, ftp.grenergy.com. To locate the documents, click on Directory pub, then Directory GRE BART. Let me know if you have any problem accessing the ftp site or the documents.

I greatly appreciate NDDH's continued work on our Coal Creek Station BART determination. Please let me know if you need additional information or have any questions.

MJ

Mary Jo Roth
Manager, Environmental Services
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Maple Grove, MN 55369-4718
office: 763.445.5212 // cell: 612.810.4677
www.GreatRiverEnergy.com

From:

Roth, Mary Jo GRE-MG [mjroth@GREnergy.com]

Sent:

Thursday, April 26, 2012 8:28 AM

To:

Bachman, Tom A.

Cc:

O'Clair, Terry L.; Olsen, Eric GRE-MG; william.bumpers@bakerbotts.com;

'michael.heister@bakerbotts.com'; Nelson, Debra GRE-MG

Subject:

RE: Coal Creek Station NOx BART Analysis

Tom,

I have consulted further with EPRI concerning their report which GRE provided as Appendix E under a confidential business information request. EPRI has determined that the report does not meet the NDAC standard for trade secret information. Consequently, Great River Energy is hereby withdrawing its request for confidentiality of this report ("Low-Baseline NOx Selective Non-Catalytic Reduction Demonstration, Joppa Unit 3").

Please let me know if I need to provide any further information or if you need a more formal withdrawal letter.

Thank you.

MJ

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Sent: Wednesday, April 11, 2012 12:43 PM **To:** O'Clair, Terry L.; Bachman, Tom A.

Cc: Olsen, Eric GRE-MG; 'William Bumpers'; Nelson, Debra GRE-MG

Subject: RE: Coal Creek Station NOx BART Analysis

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Cc: Tom Bachman - NDDH; Olsen, Eric GRE-MG; William Bumpers; Nelson, Debra GRE-MG

Subject: Coal Creek Station NOx BART Analysis

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To:

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www.GreatRiverEnergy.com

From:

Roth, Mary Jo GRE-MG [mjroth@GREnergy.com]

Sent:

Thursday, June 07, 2012 10:58 AM

To:

O'Clair, Terry L.

Bachman, Tom A.; Olsen, Eric GRE-MG; William Bumpers; Nelson, Debra GRE-MG

Cc:

Subject: Attachments: Technical Update - Coal Creek Station BART analysis Cover Letter June 7-2012.pdf; Technical Update June 7-2012.pdf; Appendix A Tables June

7-2012.pdf

Terry,

Attached please find a cover letter and technical update to the Coal Creek Station "Supplemental Best Available Retrofit Technology Refined Analysis for NOx Emissions – April 5, 2012." This June 7 technical update is responsive to comments provided by NDDH during our conference call of May 21.

Please contact me if you have any questions.

MJ

Mary Jo Roth Manager, Environmental Services **Great River Energy** 12300 Elm Creek Boulevard Maple Grove, MN 55369-4718 office: 763.445.5212 // cell: 612.810.4677

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